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ABSTRACT

This software resource directory is designed for use by teachers in the Vocational Improvement Programs (VIP)/Liaison in Kentucky who work with secondary special needs learners enrolled in a vocational education program. Section A contains a literature review of available information as it relates to microcomputers, education, and special needs learners. A list of reference books provides annotations that highlight the key concepts. Periodicals on microcomputers and special needs are cited. Section B is a software evaluation form. Section C consists of two lists: list I, "Software Suggestions," is a sample of available programs that represent vocational and academic courseware and teacher utilities; list II, "Additional Software," identifies programs recommended by external sources that are appropriate for special education and/or vocational education. Section D lists producers/distributors of software in alphabetical order. This information is provided: mailing address, telephone number, type of hardware supported, distribution policy, and a short annotation of types of software produced or distributed. Section E provides a quick reference chart for information about the types of software available from the companies listed in section D. (Throughout, resources available at the Center for Career and Vocational Teacher Education, Western Kentucky University, are so indicated.) (YLB)

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THE COMPUTER
As An Instructional Tool
In
Special Vocational Programs

(VIP-LIAISON)

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U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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THE COMPUTER AS AN INSTRUCTION TOOL IN VIP-LIAISON PROGRAMS

(Project No. D988DE023F)

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June 28, 1985

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Software Resource Directory for VIP-Liaison Programs in Kentucky

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INTRODUCTION

The material included in this "directory" was designed for use by teachers in the VIP/Liaison programs in Kentucky. These teachers work with secondary special needs learners enrolled in a vocational education program. Although applicable for others, one must remember the focus as the information is reviewed.

The "directory" includes general information about microcomputers and special needs learners. A software evaluation form is included. Some suggestions for software purchases are given as well as a sampling of software publishers and distributors.

SECTION A

Literature Summary and References

The following literature review is a summary/overview of the information available as it relates to microcomputers, education, and special needs learner. The annotated reference list includes books that were reviewed and in many cases purchased for further reference. The annotation highlights the key concepts discussed in the book. When the annotation ends like this: "(CCVTE)", this indicates that the reference will be available on loan from the special needs library in the Center for Career and Vocational Teacher Education, Western Kentucky University.

LITERATURE REVIEW

A vast amount of literature is available today that relates to microcomputers and education. The volume of information relating microcomputers and education to special education and/or special needs learners is rapidly expanding--periodicals, books, conference proceedings. This overview of related literature is general and designed to serve as an introduction to special needs learners and their interaction with microcomputers in an educational environment.

Educators should be strongly encouraged to learn to effectively use microcomputers as they have learned to use other "tools of the trade". Effective use does not mean just transferring from old mediums to this new machine, but creating, investigating, experimenting with new and stimulating uses of this tool.

In her resource book Hagen (1984) introduces the topic of microcomputers in the following manner:

> Microcomputers are tools. They are a means to an end, just like any other devised by man. How effective the tool is, in the hands of the user, depends on the training and understanding that person has of the tool. (Hagen, 1984, p.ix)

One main barrier to full implementation of microcomputers in education still exists, that is the overwhelming myths and misinformation that exist not only with educators but among the public in general. We have all heard "stories" of the robots that will take over our jobs or the individual that doesn't believe that he/she is "smart enough" to operate a computer or is afraid to touch a key because they will "mess-up" everything. Therefore, positive experiences need to be provided: opportunities to "play" with the machine, to discover that it can not do anything unless someone tells

it to do so, to overcome the idea that we must all learn to be programmers. What we do need is the opportunity to use software.

Teachers of learners with special needs use a wide variety of instructional media in order to provide efficient individualized education that meets the needs of each learner. Behrmann (1984) has identified six basic reasons why computers are valuable instructional media for teachers:

1. Usable for group and individual instruction.
2. Students receive immediate feedback and reinforcement.
3. Collect and analyze student performance data.
4. Flexibility in levels of instruction and types of child-computer interactions available.
5. Allows for self-paced instruction.
6. Allows for errorless practice.

For microcomputers to be an effective form of instructional media appropriate software must be selected. Hagen (1984) believes that the first step is to "identify the 'need' and look for software to fill that need." (p.5) Five rules reflect her philosophy for finding appropriate software. Note that these rules are much broader in scope and not just guidelines for obtaining software. The rules are:

1. "Software does not have to say 'handicapped' on the label to be useful in special education." (p.5)
2. "Train handicapped children to use the microcomputer as effeciently as possible, as early as possible." (p.6)
3. "The microcomputer can provide motivating drill-and-practice for handicapped children." (p.6)
4. "Educational use of the microcomputer for handicapped children should include individual courseware prepared with authoring systems." (p.7)
5. "Microcomputer usage for handicapped children should include intellect expansion through the use of Logo." (p.7)

A brief explanation of these five rules is in order. In searching for software, one quickly discovers that software labeled special education is quite limited. This may be due to the software industry having a limited involvement in this area of product development and/or may be due

to the fact that developers/publishers are not aware of ways in which their existing software may be used with special needs learners. As a result, if a high school student is having problems with long division, the teacher may look for a tutorial math program on division even though it may be "labeled" as an elementary math program.

Related to number one but somewhat different is the application of existing software to the needs of the student. To be an efficient computer user, students need to be able to find the keys on the keyboard of the computer efficiently and effectively. Use a typing tutor software program to teach students how to type. Remember the teaching of typing is not limited to the high school setting!

For many of our students, learning experiences require a lot of repetition, going over and over the subject matter, again and again. Using the computer for these tasks often reduces boredom, provides non-emotional responses, and is nonjudgmental of answers chosen. Students appear to be more motivated to do drill and practice exercises on the computer. (Hagen, 1984)

We readily acknowledge that learners are different and that each has needs that are often difficult and time consuming to serve. With authoring systems, the teacher is able to develop courseware appropriate for the learner. Preview several systems in order to identify the one most appropriate for you and your students.

The first four "rules" deal with the microcomputer as an extension of the teacher or parent, however, the fifth rule supports the learner's need to develop skills in thinking, problem-solving, and self-expression. Hagen (1984) states that these skills are often negected due to the pressures felt to teach facts that appear to be necessary for survival. She has

found that a language like Logo provides opportunities for students to expand their intellect: to be the teacher, to "learn by doing", to be original, to build creatively, without restrictions of right and wrong.

Various writers categorize the types of computer applications using different words but with similar meanings. Behrmann (1984) divides computer application into three broad categories: (1) computer assisted management which encompasses the many forms of recordkeeping; (2) computer managed instruction in which the teacher uses the computer for data collection, analysis, as well as IEP development; (3) computer assisted instruction for student use as an instructional medium imparting knowledge or skills or both, and as a tool to assist the learner in the manipulation of information or materials.

If used properly, microcomputers can assist educators in the teaching/learning process. The microcomputer can:

> Provide a multisensory approach to learning.
> Be used to teach a wide range of subject matter.
> Be used with diverse student populations.
> Provide direct, individualized, interactive instruction.
> Allow a student to learn at his or her own rate.
> "Remember" student responses.
> Provide instant feedback.
> Give a variety of reinforcements.
> Provide repetition, drill, and practice in a meaningful manner.
> Provide diagnostic and prescriptive information to the teacher.
> Be used as an ideal management and retrieval system for student records, assessment scores, student objectives, and IEP's.
> Free the teacher from hours of repetitious paper and pencil activities...
> Provide continuous encouragement to a student and facilitate active participation in the learning process. (Hannaford and Sloane, 1981, p.54)

Software is the key for the effective use of microcomputers in education. Taber (1983) states that there are three considerations to be made when purchasing microcomputers for educational purposes: software, hardware, and

in-service training--the most important being software. Various books and periodicals can provide in-depth criteria to aid in the selection of microcomputers. The focus here is to emphasize critical considerations of software.

Taber (1983) suggests that effective evaluation of software includes external and internal sources. External evaluation includes sources outside of your own organization while internal sources include your evaluation and others within ones' own school system (organization). External sources are becoming more available, however, it is important to consider the validity and reliability of the source. Various periodicals from computer journals to publications by professional organizations offer software reviews. A well-know clearinghouse that conducts in-depth software evaluations is MicroSIFT. CONDUIT also reviews and distributes materials developed by others.

Internal evaluation of software reflects that conducted within the user's environment--a school, university, or school system. A variety of evaluation devices are available to assist educators during the review process. Consider a review of several instruments before one is finally chosen. Examine the focus of the instrument--combine two or more if necessary. Behrmann (1984) reviews seven evaluation tools, two with a specific focus on special education software. He further defines five software categories and the criteria important for the evaluation of each.

Talk to educators currently involved in using the microcomputer in the classroom, office, etc. Find out what has worked for them, how that compares with your software needs. Order software for pre-view, visit centers that allow for software review on site. Basically, the internal evaluation should ask lots of questions and provide opportunities for "trying it out."

The microcomputer in the classroom can do much more than serve in a traditional instructional role. "Technological advances can bring speech to the nonvocal, Braille or speech to the blind, universal telephone use to the deaf, and decrease the reading, writing, and problem solving blockades for the mildly and moderately handicapped.: (Behrmann, 1984, p.93)

The microcomputer can be "trained" to recognize an individual's voice if the person is unable to enter information on the keyboard. The addition of a speech synthesizer allows the microcomputer to "speak" - helpful to the individual unable to read the written output on the screen. Two other major applications as a "tool" are being explored today. One, previously mentioned, is the use of programming languages to assist in the development of problem-solving skills. Logo has been used the most in this area.

The second "tool" application has been in the development of reading and writing skills using word processing programs. Students who struggle with paper and pencil tasks find word processing programs helpful in communicating his/her thoughts and ideas.

Individuals with physical impairments are finding that computer technology is providing assistance in their integration into the mainstream of regular education. As a tool the computer provides a mechanism for helping them circumvent their handicaps. With the rapid changes in technology today who knows what the future holds for the advancement of devices to accommodate this "tool".

This overview only scratches the surface of the information currently available. Choose one or more of the recommended references for a more in-depth review of the topic. The key to effective use of microcomputers in education is software. Spend the time necessary for software evaluation not just a quickie review.

REFERENCE BOOKS

American Vocational Association. The Use of Computers in Vocational Instruction: Basic Skills. American Vocational Association.

A collection of articles on computers in vocational education focusing on strategies, resources, references, and implementation.

Behrmann, Michael M. (editor). Handbook of Microcomputers in Special Education. College-Hill Press, 1984.

The book has three main sections which effect the overall focus: An overview of computers in special education; applications currently being used with special needs learners; and, how to "get on-line" which discusses training, software, hardware, and future possibilities. (CCVTE)

Behrmann, Michael M. and Lahm, Liz (editors). Proceedings of the National Conference on the Use of Microcomputers in Special Education. (Hartford, CT March 10-12, 1983). The Council for Exceptional Children.

A source book that reflects on specific applications rather than theory of microcomputers in special education. Topics include an overview, management, teacher training, instructional applications, and the computer as a tool. A commercial resource section is included. (CCVTE)

Chase, S. A.; Gordon, R.; and Makin, R. C. Courseware Evaluation: Form and Guide for Vocational and Technical Education. Special Publication No. 44. The National Center for Research in Vocational Education, 1984.

As the title of this publication implies, this booklet includes an evaluation form to analyze various components of instructional software. Guidelines for using the evaluation form are included. (CCVTE)

Ford, Marilyn S. (editor). Conference Proceedings. Microcomputers: Forward to the 3 C's. Arizona State University, Tempe: ASU, College of Education, 1983.

Articles from the presenters at the March, 1983 Conference are categorized under the following headings: General Interest, Hardware/ Software, Getting Started, Administrative Applications, Curriculum Applications, Literacy, Programming, and Research. The articles are diverse and numerous, offering ideas for the beginner and the expert, the classroom teacher and the administrator. (CCVTE)

Goldenberg, Paul; Russell, S. J.; Carter, C. J.; Stokes, S.; Sylvester, M. J.; and Kelman, P. Computers, Education, and Special Needs. Addison-Wesley Publishing Co., 1984.

This book is one in the Computers in Education series for educators and parents to assist them in meeting the challenge that computers present to education. The basic primer in the series is called Practical Guide to Computers in Education. This book is one that focuses on computer applications in working with special needs learners. Special areas are emphasized showing how computers can be used effectively in that area. Motivation, autonomy, and assessment are also discussed. There is a good glossary and resource lists.

Hagen, Dolores. Microcomputer Resource Book for Special Education. Preston Publishing Co., Inc.; a Prentice Hall Company, 1984.

Written from the unique perspective of an educator who is the parent of a handicapped child. Chapters provide hints for implementation, identifies specific disabilities with applications, introduces LOGO, and discusses the role in communication. An in-depth appendix provides specific information on products for the use with exceptional children by educators and parents. (CCVTE)

Klein, K. and Strother, D. B. (editors). Planning for Microcomputers in the Curriculum. Phi Delta Kappan Center on Evaluation, Development, and Research: Hot Topics Series.

Contains articles from a variety of sources to assist school administrators and teachers as they make decisions regarding the use of microcomputers in school. Following an introductory section, the focus in on planning, funding, and development strategies followed by a review of related research. Other sections focus on personnel training, literacy, scheduling, hardware, micro-management, and curriculum planning. A good source of research and practical application ideas. (CCVTE)

Linc Associates, Inc. The SpecialWare Directory: A Guide to Software Sources for Special Education. Columbus, Ohio: Linc Associates, Inc., 1983.

The SpecialWare Directory is designed to be the most comprehensive directory of courseware that is useful for special education. The product of an independent survey of publishers by LINC, the directory hopes to fill the information gap and serve as liaison between educators and commercial software publishers. Convenient indexes, descriptions of targeted age groups, subject areas, and distribution policies, and sample product descriptions give the user an accurate and comprehensive software resource reference. (CCVTE)

Pruett, Carol and Gillespie, Lori. Choosing Educational Software: A Buyer's Guide. Libraries Unlimited, Inc., 1984.

Following an overview of microcomputers in education, Part I focuses on types of evaluation, the process, the criteria, and sample evaluation forms. In Part II, the focus in on sources of software and journals, groups to serve as resource personnel, and an annotated bibliography.

Rodenstein, Judith and Lambert, Roger (editors). Microcomputers: Applications in Vocational Education. University of Wisconsin, Madison: Vocational Studies Center, 1983.

A compilation of papers from vocational educators who use microcomputers in instruction and as a tool for work. Designed specifically to serve vocational educators as a sub-group, the handbook is divided into 2 sections: The first section deals with general issues such as literacy, buying hardware and software, and beginning programming. Section 2 focuses on specific curricular areas and deals with the problems of integration of microcomputers into these curricula, effective uses, role changes of teacher/student, and the range of improvements or pitfalls one must anticipate. (CCVTE)

Rodenstein, Judith and Lambert, Roger (editors). Microcomputers in Vocational Education Handbook. University of Wisconsin, Madison. Vocational Studies Center, 1982.

This is a general handbook of information on usage of microcomputers in vocational education. Articles, reports, bibliographies, and other resources, written by experts and educators, are conveniently categorized by curricular area or topic category; example: administration, agriculture, basic skills, evaluating software, graphics, health, industrial education, and more. This handbook is a comprehensive, well-organized resource. (CCVTE)

Roehl, J. E. (editor). Computers for the Disabled; Conference Papers. Materials Development Center: Stout Vocational Rehabilitation Institute; University of Wisconsin, Stout, 1984.

A collection of papers presented at Discovery '83. The conference purpose was "to provide an overview of the many areas in which computers can serve the needs of the disabled and some specific applications of this new medium". Papers reflect new ideas, research findings, and innovations appropriate for the persons with disabilities and those working with them. (CCVTE)

Stone, Antonia. Microcomputer Software for Adult Vocational Education: Guidelines for Evaluation. Information Series No. 261. ERIC Clearinghouse on Adult, Career, and Vocational Education/The National Center for Research in Vocational Education, 1983.

A discussion of the appropriateness and necessity of microcomputers in adult vocational education is followed by a review of the categories of software. The major emphasis is on a discussion of the guidelines for evaluation and development of software. (CCVTE)

Taber, Florence M. Microcomputers in Special Education: Selection and Decision Making Process, 1983. A product of the ERIC Clearinghouse on Handicapped and Gifted Children and the Council for Exceptional Children.

A basic introduction of the microcomputer with chapters on software and hardware considerations and evaluation. Selecting media and use of the microcomputer focus on choosing the best available medium for teaching a specific concept/skill. Ways of using microcomputers in special education are identified. The last chapter focuses on elementary programming techniques. (CCVTE)

Texas Tech University. Microcomputers in Home Economics. Texas Tech University: Home Economics Curriculum Center, October, 1984.

Part I focuses on microcomputers in home economics classes; Part II on hardware; and Part III on software. They are appropriate for many program areas. An in-depth glossary and several software evaluation forms are included.

Tindall, Lloyd W. and Gugerty, John J. Effective Microcomputer Assisted Instruction for the Vocational Education Special Needs Student. University of Wisconsin, Madison: Vocational Studies Center, 1983.

A comprehensive manual designed to assist teachers in using microcomputers in the education of handicapped and disadvantaged students. Part I is an extensive listing and description of microcomputer programs which have been used by practitioners with special needs students in several vocational program areas. Part II is a compilation of ideas and descriptions of educational applications of microcomputers as well as descriptions of educational projects and programs which have integrated CAI into their curricula. (CCVTE)

Watson, Nancy R. (editor). Microcomputers in Education: Uses for the 80's (Conference Proceedings). Arizona State University: ASU, College of Education, 1982.

This publication of the January, 1982, conference proceedings is a compilation of 30 articles and reports giving insight into instructional applications, research, administrative uses, literacy, and programming. (CCVTE)

Zahniser, G.; Long, J. P.; and Nasman, L. O. Microcomputers in Vocational Education: A Decision Guide. Research and Development Series No. 239A. The National Center for Research in Vocational Education: Ohio State University, 1983.

This document is a resource and guide to assist vocational educators in identifying and addressing "a number of critical issues associated with microcomputer use, and it offers ideas on explicit ways that the microcomputer is being and can be used for vocational instruction and management". Chapters focus on instructional content, CAI, CMI, administrative uses and a summary and recommendations for microcomputer usage in vocational education. (CCVTE)

PERIODICALS ON MICROCOMPUTERS AND SPECIAL NEEDS

Catalyst
Western Center for Microcomputers
in Special Education, Inc.
1259 El Camino Real
Suite 275
Menlo Park, CA 94025

Reports latest research, products, and applications in using micros in special education.

Closing the Gap
Closing the Gap
P.O. Box 68
Henderson, NM 56044

Articles, advertisements, news and reviews related to using microcomputers in training/education of special needs learners.

SECTION B

Software Evaluation Form

Evaluating software takes time, however, the "pay-off" is having access to quality programs that are appropriate for the educational setting and meet the needs of the students. The evaluation form found on the following pages represent a compilation of many other forms that were reviewed and references that were studied. As the form is used you may want to adapt it to better meet your needs.

Evaluators:

SOFTWARE EVALUATION FORM

Instructor_____
Student Group_____

I. General Description

Program Title:_____
Subject Area/Topic:_____
Publisher or Vendor:_____
Address:_____
Cost:$_____ Includes how many disk(s)?____ tapes?____
Documentation:___pages. Are there supplementary materials?
(ditto masters, worksheets, activity guides)_____
_____
Microcomputer Brand/Model:_____ K Memory:_____
Extra hardware or peripherals needed:_____

Comments:

Distribution Policy:

Free previewing? Y N Preview period is _____ days.
** or **
Return within ____ days and get refund if dissatisfied.

Warranty against material defects? Y N For how long?_____

Includes free back-up? Y N If not, cost is $_____per disk.

Other comments:_____

Instructional Approach (Check those that apply):

Drill & Practice. . _____
Tutorial. . . . . _____
Game. . . . . _____
Simulation. . . . . _____
Problem Solving & Thinking Skills . . _____
Other_____

Teacher Aids/Utilities:
Test Generator. . . _____
Lesson Authoring. . _____
Records or Mgt. . . _____
Word Processing . . _____
Student Word Processing . . . . . _____

II. Content

Circle one: Y=Yes N=No

1. Subject matter:
   a. has educational value. 1.a. Y N
   b. focuses on a specific topic or skill. b. Y N
   c. topic is sufficiently defined and narrowed. c. Y N
   d. is accurate and free of errors. d. Y N
   e. is timely and not out of date. e. Y N
   f. is relevant and compatible with existing curriculum. f. Y N
2. Additional content may be added. 2. Y N
3. Grade or skill level is specified._____ 3. Y N
4. Reading levels are defined. _____ 4. Y N
5. Interest level / age group is specified._____ 5. Y N
6. Undesirable stereotypes are avoided. 6. Y N

Overall rating of usability related to content:

Low 1 2 3 4 5 High

III. Instructional Characteristics

1.	Instructional objectives are clearly stated. (Summarize) _____	1.	Y	N
2.	If not stated, the objectives can be inferred to be: _____			
3.	The learning activities seem appropriate for teaching the objectives. (Comment) _____	3.	Y	N
4.	The presentation of content is clear and logically sequenced.	4.	Y	N
5.	Subsections are not too long and overloaded with information.	5.	Y	N
6.	The time required to work through a prescribed section is not too long.	6.	Y	N
7.	Programs "branch" to suitable difficulty levels based on performance.	7.	Y	N
8.	Problems answered incorrectly may be repeated.	8.	Y	N
9.	Feedback messages are not excessively negative or threatening.	9.	Y	N
10.	Feedback messages are not repetitive.	10.	Y	N
11.	Audio feedback can be turned off if it is distracting or disruptive (especially if it signals errors)	11.	Y	N
12.	Error handling:			
	a. The student has more than one attempt per problem.	12.a.	Y	N
	b. Hints are given or available when errors are made.	b.	Y	N
	c. Error corrections and explanations are clear and helpful.	c.	Y	N
13.	Options under teacher control are...			
	a. some subject content.	13.a.	Y	N
	b. random or sequential presentation of problems.	b.	Y	N
	c. the mastery level to be attained by student.	c.	Y	N
	d. the content of feedback messages.	d.	Y	N
	e. the difficulty level.	e.	Y	N
	f. the assignment length or number of problems.	f.	Y	N
	g. speed of presentation/frame advancement.	g.	Y	N
	h. other _____			
14.	Record keeping:			
	a. Individual student files are kept.	14.a.	Y	N
	b. Class files are kept.	b.	Y	N
	c. Records remain after computer has been turned off.	c.	Y	N
	d. Records can be printed for permanent reference.	d.	Y	N
	e. The data recorded are: percentage correct.	e.	Y	N
	f. .. assignments completed.	f.	Y	N
	g. The options are easy to use.	g.	Y	N
	h. Additional comments: _____			

Overall rating of usability related to instructional characteristics:

Low 1 2 3 4 5 High

IV. Technical Characteristics

1.	The screen is uncluttered and easy to read.	1.	Y N
2.	The letter size is large enough to insure easy reading.	2.	Y N
3.	Graphics are well done and detailed.	3.	Y N
4.	Graphics purposefully focus attention on important concepts.	4.	Y N
5.	Expected student response mode is consistent throughout the program.	5.	Y N
6.	Operating instructions:		
	a. The instructions are easy to understand for teacher and student.	6.a.	Y N
	b. A menu of operating commands is accessible and easy to use.	b.	Y N
	c. A student may exit whenever desired.	c.	Y N
7.	The program is reliable and free of bugs.	7.	Y N
8.	The program does not easily crash (try to--enter nonsense.)	8.	Y N
9.	Editing functions are easily accessed (as on a menu) and are easy to use.	9.	Y N
10.	The documentation...		
	a. makes suggestions for program use.	10.a.	Y N
	b. includes useful supplementary student materials.	b.	Y N
	c. provides sample print-outs of an instructional sequence.	c.	Y N
	d. provides clear and complete operating instructions.	d.	Y N
11.	a. Estimated time an educator would need to learn to use the package:_____		
	b. Estimated time that a student would need:_____		

Overall rating of usability related to technical considerations:

Low 1 2 3 4 5 High

V. Summary Evaluation

Strengths:

Weaknesses:

Comments concerning usability with special needs populations:

SECTION C

Software Listing

The software listed in this section includes programs that were "collected" and reviewed as to appropriateness of use in VIP/Liaison programs. All programs are not suitable for all settings. Identify the needs of your students, then review the software.

List I, Software Suggestions, is a sample of the multitude of available programs. These represent vocational and academic courseware, and teacher utilities. These programs are available for pre-view in the Center for Career and Vocational Teacher Education, Western Kentucky University.

List II, Additional Software, identifies several programs recommended by external sources appropriate for special education and/or vocational education. Due to limited funds, these programs have not been purchased at this time, but would be good to have in a software library.

LIST I

Software Suggestions

Group A:

All of the software programs in this group are available from MECC. These programs have been "teacher-learner" tested, and generally provide excellent supplemental materials (instructions, handouts). Additionally, if your school system is a member of MECC, the purchase costs are different. Order a catalog to see the variety of programs available. The programs listed below run on an Apple, software is available for other microcomputers.

Automotive Technician Mathematics (Junior High - Vocational School)	
Volume 1: Whole Numbers & Fractions	$ 44.00
Volume 2: Decimals and Percents	$ 44.00
Master Spell (Grade 1 to Adult)	$ 43.00
Mathematics: Volume 2 - Measurement (Junior High)	$ 45.00
Study Guide (Grade 4 - Higher Education)	$ 41.00
Estimation (Grades 6 - 9)	$ 36.00
Nutrition and Food Groups (Grades 6 - 9)	$ 36.00
Science: Volume 3 - Earth-Life Science (Junior/Senior High)	$ 49.00
Teacher Utilities: Volumes 2, 3, 4 (Grades 1 - 6)	$100.00
Puzzles and Posters	$ 44.00

Group B:

The following programs for the TRS-80 are available from Western Illinois University, Curriculum Publications Clearinghouse, Horrabin Hall 46, Macomb, IL 61455. These programs are designed to show various computer applications in vocational education.

Microcomputer Applications in Vocational Education:
Health Occupations, Volumes I, II, III
Trades and Industry, Volumes I, II
Agriculture, Volumes I, II
Home Economics

Group C:

The following programs are listed by the distributors from which we purchased the materials. In many cases, this is not the publisher. Most of these products are available from more than one distributor. Cost represents the price paid for the item during the 1984-85 school year.

Product	Distributor	Cost	Hardware
Ignition Systems	Career Aids	$19.95	TRS-80
Diesel Engines	Career Aids	$19.95	TRS-80
Building Materials Costs	Career Aids	$49.00	TRS-80
Blueprint Reading	NCP	$72.00	Apple
Math Blaster	NCP	$45.00	Apple
The Factory	Sunburst	$55.00	Apple
Fractions	Milliken	$50.00	Apple
Tic Tac Show	Scholastic Software	$39.00	Apple

LIST II

Additional Software

Group A:

MECC Software:

Health Maintenance: Volume 2 - Assessment (Senior High - Adult)	$ 45.00
Nutrition: Volume 2 (Senior High - Adult)	$ 45.00
Food Facts (Junior High - Adult)	$ 45.00
Spelling: Volume 2 - Secondary (Junior High - Adult)	$ 45.00
Mind Puzzles (Grades 6 - 9)	$ 44.00

Group B:

The Bank Street Writer (Junior High - Adult) The Bank Street Speller (Junior High - Adult) [Word processing and spelling checker]	$ 69.95 to $ 95.00 each
Logo [Easy language] (Elementary - Adult)	$ 99.95 to $149.95
The Print Shop (Grade 6 and Up)	$ 49.95
The Master Type [Touch typing taught in game format]	$ 39.95
Teacher Authoring System	$149.00
E-Z PILOT [Authoring system]	$ 49.95
The Game Show [2 persons or 2 teams]	$ 39.95

Group C:

Language Related:	
Word Attack! [Game format for words/meanings]	$ 49.95
Snooper Trooper Case #1: Granite Point Ghost [Interactive mystery]	$ 44.95
Math Related:	
Arcademic Drill Builders (Kindergarten - Grade 12) [Several programs]	$ 44.00 each
SemCalc: The Word Problem Solver (Grades 6 - 12)	$ 95.00
Explorer Metros: A Metric Adventure (Grade 4 - Adult)	$ 55.00

EXTERNAL SOURCES USED IN SOFTWARE EVALUATION

Arithmetic Teacher
National Council of Teachers of Mathematics
1906 Association Drive
Reston, VA 22091

Classroom Computer Learning
5615 West Cermak Road
Cicero, IL 60650

Computing Teacher (The)
University of Oregon
1787 Agate Street
Eugene, OR 97403

Creative Computing
Box 789-M
Morristown, NJ 07632

Educational Technology
140 Sylvan Avenue
Englewood Cliffs, NJ 07632

Electronic Learning
730 Broadway
New York, NY 10003

Journal of Learning Disabilities
5615 West Cermak Road
Cicero, IL 60650

Media Review
P.O. Box 425
Ridgefield, CT 06877
(Available only at larger media centers, universities)

Mathematics Teacher
National Council of Teachers of Mathematics
1906 Association Drive
Reston, VA 22091

MicroSIFT Courseware Reviews
MicroSIFT Project
Northwest Regional Educational Library
300 S.W. Sixth Avenue
Portland, OR 97204

or

Disseminator:
Ms. Lydia Wells Sledge, Director
Unit for Educational Improvement
Kentucky Department of Education
1808 Capital Plaza Tower
Frankfort, KY 40601

SECTION D

Publishers and Distributors of Software

During the past year approximately 200 pieces of material were received from those involved with software at various levels. These materials were reviewed and the listing in this section is a representative sample of the many sources of software. These were identified for inclusion because they included one or more of the following:

1) identified material as appropriate for special education.
2) included materials in vocational education.
3) included academic courseware that could be used with learners with special needs.
4) included software that enhanced the microcomputer's role as a "tool".

Producers/Distributors are listed in alphabetical order and include a mailing address and telephone number (where available). This is followed by the type of hardware supported by their software and distribution policies related to preview, warranties, and back-up availability. A short annotation includes information that gives a general overview of the types of software that the company produces and/or distributes.

Suggestion 1: Review the list, then write the selected companies for a copy of their current catalog. A form letter on school letterhead stationery will suffice.

Suggestion 2: Several companies will conduct a software search. Note the companies with an * by the name.

Suggestion 3: The U. S. Department of Education has a Special Education Software Center that will assist you in finding special education software for instruction, assessment, administration, and other special needs. Call toll free (800) 327-5892.

Suggestion 4: For a more in depth directory of software for special education see: The SpecialWare Directory, 1983. Available from LINC Associates, Inc., 46 Arden Road, Columbus, OH 43214 or on loan from the special needs library, Center for Career and Vocational Teacher Education, Western Kentucky University.

PRODUCERS AND DISTRIBUTORS OF SOFTWARE

Advanced Ideas, Inc.
2550 Ninth Street
Suite 104
Berkely, CA 94710
(415) 526-9100
Hardware: Apple series, Com 64, IBM PC PCjr PCXT, Acorn.
Distribution Policy: Not Given.

Courseware approved by NEA. Most of their educational programs present material from various subjects in lively game show formats. In some cases, a mini-authoring system allows insertion of your own material. The game shows resemble the Match Game, Tic-Tac-Toe, and Concentration. Recommended for young children and adults.

Aquarius People Materials, Inc.
P.O. Box 128
Indian Rocks Beach, FL 33535
(813) 595-7890
Hardware: Apple II IIe, TRS 80.
Distribution Policy: Return if unsatisfied. Back-ups $10.00 each. Free networking if available.

These lessons are written on a lower reading level, focusing on survival skills/life applications of subject matter. Topics: Basic math, survival skills, and some in vocational education subjects.

BLS, Inc.
Random House School Division
2503 Fairlee Road
Wilmington, DE 19810
(302) 478-2451
Hardware: Apple II IIe, TRS 80 III 4.
Distribution Policy: 60 day warranty on materials. No guarantee of program suitability. $10.00 per back-up.

BLS offers sequential CAI tutorials in basic mathematics, career arithmetic, higher math and spelling. Each topic is divided into smaller, multi-disk subtopics. Starting at lower elementary levels, BLS Tutorcourses provide branched, individualized instruction. Reading and skill levels are clearly specified.

Barron Enterprises
714 Willow Glen Road
Santa Barbara, CA 93105
(805) 687-5873
Hardware: Apple II IIc, IBM PCjr, VIC 20, Pet, Superpet, 80 Col. CBM.
Distribution Policy: Not Given.

"Type Right," their only product, is a complete typing tutorial for children and adults. It starts from the beginning and no documentation is necessary. The writings are selected from career areas. $39.95.

Basics and Beyond, Inc.
Pinesbridge Road, Box 10
Amawalk, NY 10501
(914) 962-2355
Hardware: TRS 80 I III (Most programs come on tape only. Not copy-protected--transfer to disk.).
Distribution Policy: Money-back guarantee for 90 days.

Variety of programs including drills and games on math and spelling. Each "Microcosm" disk (I, II, or III) offers approximately 30 different programs.

Behavioral Engineering
230 Mt. Hermon Road, #207
Scotts Valley, CA 95066
(408) 438-5649
Hardware: Apple, VIC 20, IBM, Com 64.
Distribution Policy: Not Given.

Emphasis on memory techniques from "neuro-linguistic" psychology. "Typing Strategy" and "Letter Man" are two for which independent reviews were provided by the publisher. The memory strategies are new and unusual.

BrainBank, Inc.
220 Fifth Avenue
New York, NY 10001
(212) 686-6565
Hardware: Apple, Com 64, Pet, Acorn, TRS 80, IBM.
Distribution Policy: Schools can preview with school purchase order for two weeks.

Grammar, suffixes and prefixes, reading comprehension, and tutorials on the body and skeletal system.

Britannica Computer Based Learning
Encyclopaedia Britannica Educational Corporation
425 North Michigan Avenue
Chicago, IL 60611
(800) 554-9862
Hardware: Apple series, TRS 80 III 4, Atari, Com 64.
Distribution Policy: Preview only at district level. However, return if "curriculum needs" not met. 90 day warranty; back-ups available at time of purchase--$10.00 each. Special terms for networking.

Courseware offered in the language arts, science, and survival skills. An electronics package is also available. Targeted age groups well defined for all software.

Bytes & Pieces
P.O. Box 525
E. Setauket, NY 11733
(516) 751-2535
Hardware: Apple series, Com 64, IBM PC, Atari.
Distribution Policy: Not Given.

Distributor of software for companies in most academic subjects, K-12. Math programs available for basic operations, mixed numbers, percentages, and ratios.

Career Aids, Inc.
20417 Nordhoff Avenue
Department Z 5
Chatsworth, CA 91311
(818) 341-8200
Hardware: Apple II IIe, Com 64, Pet, IBM PC, TRS 80 I III.
Distribution Policy: No preview, but may be purchased on 30 day on-approval basis.

Software exclusively for vocational and career education. Sample topics: blueprint reading, circuit analysis and layout, ignition systems, welding, diesel engines, and more. A must if you are looking for vocational software.

Compu-tations
P.O. Box 502
Troy, MI 48099
(313) 689-5059
Hardware: Apple II, Atari.
Distribution Policy: Not Given. Free replacement of defective disks.

Distributor for a variety of companies. No vocational offerings. Topics: spelling, lower level math, and teacher utilities such as a lesson planner and a test maker/filer.

The Continental Press
Elizabethtown, PA 17022
(800) 233-0759
Hardware: IBM PC, TRS 80, Com 64, Atari, Apple series.
Distribution Policy: 30 day on-approval ordering. 1 free back-up. Money-back guarantee.

Good all-around catalog of software in basic and advanced skills with offerings from upper elementary to high school levels. Sample offerings: language mechanics, mathematics programs, worksheet generation in specific math subjects, games, typing, thinking skills, and a good selection of teacher aid programs.

Creative Publications
3977 East Bayshore Road
P.O. Box 10328
Palo Alto, CA 94303
(415) 968-3977
Hardware: Apple II+ IIe.
Distribution Policy: Refund or exchange if dissatisfied after purchase.

This catalog of primarily printed materials contains a software section focusing on computer literacy and programming. Also, intermediate level packages (upper elementary-junior high) for math, vocabulary, and spelling.

Curriculum Publications Clearinghouse
Western Illinois University
Macomb, IL 61455
(309) 298-1917
Hardware: Apple II+, Com Pet.
Distribution Policy: No review of materials unless special arrangements are made.

Software offerings limited. Offers multi-program diskettes for each vocational program area intended to demonstrate computer applications on the job and in the classroom.

Dynacomp, Inc.
P.O. Box 18129
Rochester, NY 14168
Hardware: Apple, Atari, IBM PC, TRS 80 series.
Distribution Policy: No on-approval ordering. 30 day warranty. Replace for 1 year for $5.00 copy charge.

This company features software which is a bit off the beaten path for the hobbyist, the serious programmer, and the educator. Dynacomp offers the only listing of public domain (uncopyrighted) programs among the companies reviewed. In addition, they offer a selection of programs in most academic areas, one in electronics, and some in class management and administration.

EMC Publishing
Changing Times Education Service
300 York Avenue
Saint Paul, MN 55101
(800) 328-1452
Hardware: TRS 80 I III 4, Apple II II+ IIe IIc.
Distribution Policy: Return within 30 days after purchase, if dissatisfied. Back-ups vary in price--order when purchasing original. Terms for networking.

Offerings in reading, language arts, spelling, math, consumer/life skills, trade/technical, agriculture, typing and administration. Programs specified for special needs/remedial students in reading, spelling, and basic math.

Educational Activities, Inc.
P.O. Box 392
Freeport, NY 11520
(800) 645-3739
Hardware: Apple, TRS 80, Atari, Com 64, Pet, IBM PC PCjr, Acorn.
Distribution Policy: 30 day preview. Free back-ups. Satisfaction guaranteed.

Wide selection of educational software focusing on math and language arts. Games, drills, and tutorials in many math areas are offered, as well as packages in phonics, spelling, writing, punctuation, and writing skills. Some of the math programs are designed for special education and remedial secondary.

Educational Courseware
67A Willard Street
Department FW2
Hartford, CT 06105
(203) 247-6609
Hardware: Apple, IBM PC.
Distribution Policy: 1 back-up can be purchased upon initial ordering. Terms for networking and updating the programs.

Limited offerings. Teacher management and create-a-lesson authoring system. Computer literacy tutoring packages. Small selection in math, science, and biology.

Educational Teaching Aids
159 W. Kinzie Street
Chicago, IL 60610
(312) 559-1400
Hardware: TRS 80 III, Apple II.
Distribution Policy: Return within 30 days if dissatisfied.

Small offering; more in computer literacy and usage. They do offer several intermediate level language and math programs designed to reinforce real life math skills.

Educulture
1 Dubuque Plaza
Dubuque, IA 52001
(800) 553-4858
Hardware: Apple II II+ IIe.
Distribution Policy: 30 day preview.

Their offerings in math and language are for average to above average students. Basic grammar, counseling, and employability packages are available.

Edusoft
P.O. Box 2560
Department 51
(800) EDUSOFT
Hardware: TRS 80 III 4, Apple IIe, Com 64.
Distribution Policy: 30 day preview; money-back guarantee.

Some step-by-step drills and tutorials in the basic math operations may be of use with the special needs learner.

Fireside Computing, Inc.
5843 Montgomery Road
Eldridge, MD 21227
(301) 796-4165
Hardware: TRS 80 III.
Distribution Policy: No preview. Networking.

Fireside offers two sophisticated CAI authoring systems.

Follett Library Book Co.
4506 Northwest Hwy.
Crystal Lake, IL 60014
(800) 435-6170
Hardware: Apple II series.
Distribution Policy: Free shipping. 30 day examination period.

Follett offers subject-specific software catalogs in the areas of science, math, and language arts, as well as one big catalog which covers such areas as business, teacher utilities and management, guidance, library aids, word processing, and special education.

Gamco Industries, Inc.
P.O. Box 310V1
(310T6 for special ed. catalog)
Big Springs, TX 79720
(800) 351-1404
Hardware: Apple series, Com 64, TRS 80 III 4, Pet 16K, Atari 800.
Distribution Policy: No free preview, but may return 30 days after purchase for refund.

Two catalogs: One for the exceptional student, the other focuses on regular software in survival skills (5th grade reading level), science, language arts, teacher utilities, and math--a good general catalog containing some products not found elsewhere.

Gessler Publishing Co., Inc.
The Educational Software Catalog
New York, NY 10003
(212) 673-3113
Hardware: Apple series, Com 64, IBM PC, Atari.
Distribution Policy: Not Given.

Distributor of software for companies in most academic subjects, K-12. Math programs available for basic operations, mixed numbers, percentages, and ratios.

Goodheart & Willcox Co.
123 W. Taft Drive
South Holland, IL 60473
(312) 333-7200
Hardware: Apple II+ IIe.
Distribution Policy: Guarantee on defective software.

Offers software for spelling and vocabulary drill for these vocational programs: architectural drawing, mechanical drafting, auto mechanics, carpentry, printing, graphic arts, welding, masonry, industrial education, health occupations, and safety.

★Great American Opportunities, Inc.
P.O. Box 77
Nashville, TN 37202
(800) 251-1542
Hardware: Apple, IBM, TRS 80.
Distribution Policy: "100 percent guarantee on every program."

This clearinghouse/distributor will conduct custom software searches to meet your needs. A sample search included a listing of approximately 60 packages in diverse vocational areas. Examples: job readiness, oxyacetylene and arc welding, micrometers, auto tech math, blueprint reading, rafters and stairs, basic electronics, shop safety, money management, circuits, arc welding, nutrition and foods, and more.

Hartley Courseware, Inc.
133 Bridge Street
Dimondale, MI 48821
(517) 646-6458
Hardware: Apple series, IBM.
Distribution Policy: 60 day warranty; afterward, $10.00 replacement fee. Previewing depends on location. If original price > $49.00, free back-up; if not, $10.00 fee. Update old program for one-half price.

Contains helpful chart of specifications and features for all software. Topics: language arts, math, teacher aids, and authoring systems.

Hopkins School District 270
Evaluation Center, Room 246
Hopkins, MN 55343
(612) 933-9230
Hardware: Apple II.
Distribution Policy: Not Given.

A sophisticated "Mastery Management System" for use on Apple II is offered. Analyzes test results--tells if instructional objectives are mastered. Helps analyze achievement in terms of stated instructional objectives.

Instructional Communications Technology, Inc.
10 Stepar Place
Huntington Station, NY 11746
(800) CALLICT
Hardware: Apple II.
Distribution Policy: Free replacement during 90 day warranty; up to two years afterward--$10.00 fee. Back-ups are one-half price.

This company distributes a variety of teaching hardware and materials, including some CAI packages. An example is their Math Power tutorial, which contains elaborate, step-by-step explanations. It, like several other of I/CT's multi-disk packages, is well-documented and includes worksheets. Individual disks may be purchased.

Intellectual Software
798 North Avenue
Fairfield, CT 06432
(800) 232-2224
Hardware: IBM PC PCjr, TRS-80 III 4, Com 64, Apple series.
Distribution Policy: 30 day return period.

Special education section. Small business and health section. Good mid-level math (grades 5-9) section.

K-12 Micromedia
172 Broadway
Woodcliff Lake, NJ 07675
(201) 391-7555
Hardware: Apple, Atari, Com 64, IBM PC, TRS 80.
Distribution Policy: 30 day on-approval ordering.

Good collection from companies in all academic areas: math, reading and language arts, IEP writer.

MCE, Inc.
157 S. Kalamazoo Mall
Kalamazoo, MI 49007
(800) 421-4157
Hardware: All Apple II IIe, Franklin.
Distribution Policy: 30 day guarantee on materials; replacement afterward for $20.00. Back-up may be bought only at time of original purchase. Return product after talking with an educational consultant to determine inappropriateness.

Large section for special needs offers money management, personal finance, home safety, employability skills. Voice Input Module for handicapped.

McGraw-Hill Book Company
Distribution Center
Manchester Road
Manchester, MO 63011
(314) 227-1600
Hardware: IBM PC, Apple, TRS 80, Pet.
Distribution Policy: 30 day on-approval examination.

Their Computer Book & Software Catalog has a wealth of books and texts on programming languages and microcomputer applications for those interested in learning in-depth about programming. Several software packages suitable for school use in math and spelling.

MECC
3490 Lexington Avenue North
St. Paul, MN 55112
(612) 481-3500
Hardware: Apple, Atari, Acorn, IBM, Com 64, TRS 80 III 4 and TRS 80 Color Computer.
Distribution Policy: May return for refund if dissatisfied. Free back-ups. Lifetime guarantee on all diskettes.

MECC, a consortium formed to aid in developing CAI software for Minnesota schools and colleges, has developed many excellent courseware packages in various curriculum areas. All packages are field tested. Sample topics: auto tech math, basic arithmetic, estimation, measurements in the English system, and teacher utilities in lesson authoring. Documentation is excellent. Tutorials offer examples and explanations when errors are made. Many packages provide masters for student worksheets and transparencies.

Media Materials, Inc.
Department 858001
2936 Remington Avenue
Baltimore, MD 21211-2891
(800) 638-1010
Hardware: Apple II II+ IIe, TRS 80 III 4. Networking terms available for Tandy and Corvus networks.
Distribution Policy: Lifetime free replacement if damaged during normal classroom use. Satisfaction guaranteed.

Programs are written on high interest level and low reading level (grade 2-4). Documented and supplemented with student materials. Designed with a life skills/real world application approach. Sample topics: basic math, consumer-survival math, employability, reading, phonics, and vocabulary.

Merit Computer Resource Center
Dr. R.A. Smith
Palm Springs, CA 92262
(619) 323-3991
Hardware: Apple II+ IIe, Atari 800, TRS 80 III 4, Com 64, IBM PC PCjr.
Distribution Policy: Preview for 30 days.

500 selected programs on many ability levels in following areas: teacher utilities, administration, business, language arts, reading, math, and others.

The Micro Center
The Time Saver Catalog
Department M R 1
P.O. Box 6
Pleasantville, NY 10570
(800) 431-2434
Hardware: Mostly Apple, Atari, and Com 64. Some TRS, IBM PCjr, Pet, VIC.
Distribution Policy: Money-back guarantee.

Approximately 280 programs in math and language arts. Drills as well as games in math and survival skills, such as the popular "Arcademic Skillbuilders." Many offerings in the middle and lower levels.

Microcomputer Software Systems
4716 Lakewood Drive
Metairie, LA 70002
(504) 887-8527
Hardware: All TRS 80 I III 4.
Distribution Policy: No preview.

Limited offerings: Basic arithmetic drill features fractions, decimals. The measures drill deals with the English and metric systems in liquid, weights, distance, and dry measures.

Microcomputer Workshops Courseware
225 Westchester Avenue
Port Chester, NY 10573
(914) 937-5440
Hardware: Apple II+ IIe IIc, Com 64, Pet, IBM PC PCjr, Atari.
Distribution Policy: 30 day evaluation period; disks are unconditionally guaranteed and will be replaced if they fail. One free back-up with each purchase. Networking terms.

Mid-level programs in language arts, especially in grammar. The math section offers basic math and three packages each on decimals and fractions; one in remedial math (grades 9-12) and an elementary introduction to electrical circuits.

Micro Lab
2699 Skokie Valley Road
Highland Park, IL 60035
(312) 433-7550
Hardware: Apple II series, IBM PC PCjr, Atari, Com 64, ColecoVision.
Distribution Policy: Not Given.

Includes teacher utilities such as "The Administrator," as well as a test generator and word processor.

Micro Learningware
Hwy. 66 South
P.O. Box 307
Mankato, MN 56002-0307
(507) 625-2205
Hardware: Apple II series, Com Pet & 64, TRS 80 I III 4, IBM PC PCjr.
Distribution Policy: 30 day on-approval ordering; demo disks available; guarantee on materials; 1 free back-up; some networking.

Offerings for academic subjects. Several low to mid-level math packages may be useful for remediation; also offered is metric conversion program (not a tutor on metrics). In language there are spelling and grammar packages and a vocabulary program with modifiable word lists. Business programs and a marketing simulation may be useful for Mkt. & D.E. or business classes.

Microphy's Programs
1737 West 2nd Street
Brooklyn, NY 11223
(212) 375-5151
Hardware: Apple II, TRS 80 I III 4, Com Pet/CBM, Com 64/VIC
Distribution Policy: Not Given.

Most of their programs in math and science generate problems and answers randomly each run through. The aim is mainly to provide practice problems and answers.

Micro Power & Light
12820 Hillcrest Road
Suite 219
Dallas, TX 75230
(214) 239-6620
Hardware: Apple only.
Distribution Policy: 45 day preview period costs $5.00 per disk. Back-ups cost $15.00 extra. Return within 60 days for free replacement; later, 50 percent of price is charged. Corvus networking.

Programs available on body systems, vocabulary, spelling, punctuation, and measurements using three lab instruments.

Micro Publishers, Inc.
Box 2515
State University, AR 72467
Hardware: Apple II.
Distribution Policy: Not Given.

Only two products are offered--two basic programs designed to help in IEP development. One stores personal information and test scores. The other asks for three phrases concerning an IEP and then strings these phrases together to form one IEP statement.

Milliken Publishing Company
1100 Research Boulevard
P.O. Box 21579
St. Louis, MO 63132-0579
(314) 991-4220
Hardware: Apple II IIe, Atari 800.
Distribution Policy: 30 day approval ordering. Most diskettes $40.00-$45.00. Back-ups are 50 percent of original price and must be bought on first order.

Each program keeps record of student performance. Many offerings are in multi-disk sequences, but may be purchased seperately. Offerings in many areas of language arts and math; also, word processing and cloze procedure.

NTS Software
141 W. Rialto Avenue
Rialto, CA 92376
Hardware: Apple II+, TRS 80 I III.
Distribution Policy: Return only if defective, and then within 10 days. If damaged during use, 50 percent of current price is charged.

Math programs suitable for remediation in ratios, areas and volume, and others. One program is designed to diagnose math deficiencies at 32 math proficiency levels, grades 5-9. Also offerings in language and grammar.

* National Innovative Media Co.
Route 2, Box 310B
Calhoun, KY 42327
(502) 273-5050
Hardware: Varies.
Distribution Policy: Varies.
A clearinghouse and vendor which offers individualized assistance in conducting software searches for teachers in vocational and academic areas. NIMCO has access to many software producers and distributors.

Nationwide Computer Products
P.O. Box 61
1380 S. Pennsylvania Avenue
Morrisville, PA 19067
(800) EDU-SAVE
Hardware: Apple, Atari, Pet, VIC 20, Com 64, IBM PC.
Distribution Policy: 30 day on-approval ordering.
Offers discount on most products. Business, marketing and distributive education programs available, including some simulations. Offerings in some vocational and most academic areas. A special education section is included.

Opportunities for Learning, Inc.
20417 Nordhoff Street
Department 9
Chatsworth, CA 91311
(818) 341-2535
Hardware: Apple series, Pet, Com 64, IBM PC PCjr, TRS 80 I III 4.
Distribution Policy: 14 day on-approval ordering.
Selected software for secondary and college levels. Special needs offerings in survival skills. Offerings in most academic areas. Company offers same vocational programs found in Career Aids Catalog.

Peachtree Software
Management Science America, Inc.
3445 Peachtree Road, N.E.
8th Floor
Atlanta, GA 30326
Hardware: Apple series, Franklin Ace 1000 1000+, Com 64, IBM PC, Atari 800.
Distribution Policy: Not Given.
Producers of home, office, and educational software. Areas: basic arithmetic skills, fractions, decimals, reading, spelling and writing programs.

Quality Educational Designs
P.O. Box 12486
Portland, OR 97212
(503) 287-8137
Hardware: Apple II, Pet, TRS 80 I III 4 (tape/disk).
Distributive Policy: 14 day guarantee on material defects. No warranty on fitness for purpose. Make back-ups for use on 1 computer.

Mathematics programs in tutorial, drill and game modes. Multi-disk packages available in four areas: basic math, factoring whole numbers, fractions, and decimals.

Random House
Department 9103
400 Hahn Road
Westminster, MD 21157
(800) 638-6460
Hardware: Apple II+ IIe, Atari, TRS 80 I III (disk or cassette), Franklin Ace, IBM. Networking.
Distribution Policy: 25 percent discount for schools. Return for refund within 30 days if dissatisfied. Back-ups $10.00 each.

Courseware in reading, language arts, mathematics, computer literacy, and class management. Some programs equipped with record keeping system. Skill and interest levels specified for each package.

Raptor Systems, Inc.
324 South Main Street
Suite 1
Stillwater, MN 55082
(612) 430-2980
Hardware: Apple II+ IIe, Franklin Ace, IBM PC, and other business computers (Burroughs, Wang, etc.).
Distribution Policy: Not Given.

Producer of "The Author," a complete CAI authoring system for the non-programmer. Branching, record keeping and other functions can easily be built into drills, simulations, and tutorials.

Right On Programs
140 East Main Street
Huntington, NY 11743
(516) 271-3177
Hardware: Apple II+ IIe, Pet, Com 64. Library mgt.: TRS 80 and IBM.
Distribution Policy: Damaged disk or tape replaced forever for $5.00.

Limited offerings in low level math. On secondary level: language arts, writing, grammar, language mechanics and punctuation, and a teacher grade book.

River Bend Software
P.O. Box 637
Atchinson, KS 66002
(913) 367-4454
Hardware: Apple II+ IIe.
Distribution Policy: Return within 15 days if dissatisfied.

Modularized software on English grammar and usage, and capitalization and punctuation.

SRA/ Science Research Associates, Inc.
155 North Wacker Drive
Chicago, IL 60606
(800) 621-0476
Hardware: Apple II+ IIe, Atari, IBM, TRS 80 III.
Distribution Policy: Return for refund within 30 days if dissatisfied. Back-ups are $10.00 per disk. 25 percent off for schools on all products.

Grade levels for all programs well defined. Sample topics: a multi-disk comprehensive math package, sentence structure, spelling, vocabulary, and class management. A comprehensive student management option is available on some packages.

STA/ Mind Vocational Software
Southwest Tele-Computer Corporation
5845 Gardner Hwy.
Alexandria, LA 71303
Hardware: Not Given.
Distribution Policy: Not Given.

Vocational software clusters in mechanics, cooking/baking, retailing, construction trades, and metal trades.

SVE (Society for Visual Education)
Department VE
1345 Diversey Parkway
Chicago, IL 60614
Hardware: Apple II+ IIe IIc, Com 64, TRS 80 III, TRS 80 Color, IBM PC PCjr.
Distribution Policy: 15 day previewing or buy and return for refund within 30 days of purchase. 6 month guarantee on disk.

Wide selections in mathematics (basic math to algebra), thinking skills, science, CAI authoring, reading, vocabulary, writing gammar, and computer literacy.

Scholastic, Inc.
P.O. Box 7503
2931 East McCarty Street
Jefferson City, MO 65102
Hardware: Apple II II+ IIe, Com 64, Pet, TRS 80 III 4, Atari 400 800 & 1200.
Distribution Policy: Free 30 day previewing.

Broad language arts and mathematics offerings, teacher utilities, typing, business education, problem solving, and more. Producer and distributor of own products as well as distributor for other companies.

Shenandoah Software
P.O. Box 776
Harrisonburg, VA 22801
(703) 433-9485
Hardware: TRS 80 III 4.
Distribution Policy: Disk guaranteed 1 year against defects. Return within 30 days for refund. Make own personal back-ups as needed.

Teacher utilities for puzzle making, exam storing, and generating, CAI drill writing, and grade keeping.

South-Western Publishing Co.
5101 Madison Road
Cincinnati, OH 45227
Hardware: Apple series, TRS 80 I III 4, IBM PC. Some networking.
Distribution Policy: 30 day on-approval ordering. Update or replace for $15.00.

Educational business courseware in the following areas: beginning and advanced keyboarding, accounting, information processing, and business office procedures. Several simulations in office, retail, and entrepreneurial settings allow students to apply their accounting and clerical skills in wholesale pet supply, insurance, billing clerk, tax preparation, and payroll operations.

Sunburst Communications
39 Washington Avenue
Room BG 9 3
Pleasantville, NY 10570
(800) 431-1934
Hardware: Apple II II+ IIe IIc, Atari 400 800 XL series, Com 64, IBM PC PCjr, TRS 80 I III 4.
Distribution Policy: Satisfaction guaranteed. Free 30 day previewing. Most programs include back-up. Lifetime guarantee on disk.

Producers and distributors of a variety of educational software for all ages in problem solving, science, math, language arts, health, and computer literacy. Age groups well defined. Many programs in problem solving and thinking skills.

Teach Yourself by Computer Software, Inc.
2128 W. Jefferson Road
Pittsford, NY 14534
(716) 424-5453
Hardware: Apple, TRS 80.
Distribution Policy: 30 day on-approval ordering.

Offerings limited to test writers, an authoring system, a record keeper, and several drill programs in math and language.

The Test Bank from
Advanced Technology Applications
3019 Governor Drive
San Diego, CA 92122
(619) 569-2693
Hardware: TRS 80 III 4.
Distribution Policy: Not Given.

The Test Bank is a test generator with powerful filing, sorting and printing capabilities.

Touch Technologies
609 South Escondido Boulevard
Suite 101
Escondido, CA 92025
(619) 743-0494
Hardware: Apple II+ IIe IIc, IBM PC XT jr., Com 64.
Distribution Policy: 30 day evaluation period.

Producers of the CLAS authoring system for writing drill and practice lessons without branching or record keeping.

Vocational Instructional Software
P.O. Box 1688
Stillwater, OK 74076
Hardware: Apple II+ IIe IIc.
Distribution Policy: 30 day on-approval ordering. Update at nominal cost. The master disk is guaranteed for life.

Competency based vocational instruction in agriculture, home economics, and inventory. Management system is employed to guide instruction.

SECTION E

Reference Chart

This chart is provided as a quick reference for information about the types of software available from the companies listed in Section D.

Reference Chart

X = PROGRAM(S) FOR REGULAR STUDENTS

O = PROGRAM(S) FOR SPECIAL NEEDS

PUBLISHER / DISTRIBUTOR	TEACHER AIDS: AUTHORING SYSTEMS	TEACHER AIDS: IEP'S	TEACHER AIDS: RECORD/DATA MGT.	TEACHER AIDS: WORD PROCESSING	TEACHER AIDS: TEST GENERATOR	BASIC ACADEMIC SKILLS: MATHEMATICS: GENERAL/BASIC	MATHEMATICS: ADD./SUB.	MATHEMATICS: DIV./MULT.	MATHEMATICS: FRACTIONS	MATHEMATICS: DECIMALS	MATHEMATICS: RATIO/PROPORTION	MATHEMATICS: METRICS	MATHEMATICS: MEASUREMENT	MATHEMATICS: WORD PROBLEMS	LANG. ARTS: SPELLING	LANG. ARTS: VOCABULARY	LANG. ARTS: READING	LANG. ARTS: GRAMMAR	VOCATIONAL ED.: AGRICULTURE	VOCATIONAL ED.: BUS./OFFICE	VOCATIONAL ED.: GUIDANCE	VOCATIONAL ED.: HOME ECONOMICS	VOCATIONAL ED.: MKT./D.E.	VOCATIONAL ED.: TECHNICAL	VOCATIONAL ED.: TRADES/IND.	SUPPLEMENTAL: EMPLOYABILITY	SUPPLEMENTAL: LIVING SKILLS	SUPPLEMENTAL: PROBLEM SOLVING
ADVANCED IDEAS, INC.															X	X	X												
AQUARIUS PEOPLE MATERIALS						XO	X	X	X	X				X		X	X	X								X	X		
BLS, INC.						X	X	X	X	X	X	X	X		X		X	X						X	X					
BASICS AND BEYOND						X		X							X														
BEHAVIORAL ENGINEERING						X									X					X									
BRAINBANK, INC.																	X	X											
BRITANNICA COMPUTER			X	X		X	X	X	X	X	X		X		X	X	XO	X						X		X	X	X	
BYTES & PIECES			X		X	X	X	X	X	X	X		X		X	X		X		X									
CAREER AIDS, INC.	X		X	X	X	X						X	X						X	X	X	X	X	X	X	X	X		
COMPU-TATIONS					X	XO									XO	X				X									
THE CONTINENTAL PRESS	X		X	X	X	X	X	X	X	X	X				X	X	X	X		X								X	
CREATIVE PUBLICATIONS			X	X		X	X	X		X	X				X	X	X	X		X									
CURRICULUM PUBLICATIONS																			X			X			X				
DYNACOMP, INC.			X		X										X					X					X		X		
EMC PUBLISHING			X			XO	XO	XO	X	X			X	X	X	X	O	X		X					X	X				
EDUCATIONAL ACTIVITIES					X	XO	XO	XO	XO	XO	X			X	X	X	X	X		X							XO			
EDUCATIONAL TEACHING AIDS						X	X	X	X	X			X	X	X	X	X										X			
EDUCATIONAL COURSEWARE	X		X		X	X														X								X	
EDUCULTURE																		X				X				X	X		
EDUSOFT			X		X	X	X	X	X																				
FOLLETT LIBRARY BOOK CO.	X		X	X	X	XO	X	X	X	XO		X		X	X	XO	X	XO			X					XO	XO	X		

REFERENCE CHART

X = PROGRAM(S) FOR REGULAR STUDENTS

O = PROGRAM(S) FOR SPECIAL NEEDS

PUBLISHER / DISTRIBUTOR	TEACHER AIDS: AUTHORING SYSTEMS	TEACHER AIDS: IEP'S	TEACHER AIDS: RECORD/DATA MGT.	TEACHER AIDS: WORD PROCESSING	TEACHER AIDS: TEST GENERATOR	BASIC ACADEMIC SKILLS: MATHEMATICS: GENERAL/BASIC	MATHEMATICS: ADD./SUB.	MATHEMATICS: DIV./MULT.	MATHEMATICS: FRACTIONS	MATHEMATICS: DECIMALS	MATHEMATICS: RATIO/PROPORTION	MATHEMATICS: METRICS	MATHEMATICS: MEASUREMENT	MATHEMATICS: WORD PROBLEMS	LANG. ARTS: SPELLING	LANG. ARTS: VOCABULARY	LANG. ARTS: READING	LANG. ARTS: GRAMMAR	VOCATIONAL ED.: AGRICULTURE	BUS./OFFICE	GUIDANCE	HOME ECONOMICS	MKT./D.E.	TECHNICAL	TRADES/IND.	SUPPLEMENTAL: EMPLOYABILITY	LIVING SKILLS	PROBLEM SOLVING
NATIONWIDE COMPUTER	X		X	X	X	X	X	X	X	X					X	X	X	X		X		X	X		X	X	X	
OPPORTUNITIES FOR LEARNING			X	X	X	XO	X	X	X	X	X			X	X	X	X	X		X		X				XO	XO	
PEACHTREE SOFTWARE						X	X	X	X	X					X		X	X										
QUALITY EDUCATIONAL						X		X	X	X							X											
RANDOM HOUSE	X		X		X	X	X	X	X	X					X	X	X	X										
RAPTOR SYSTEMS, INC.	X																											
RIGHT ON PROGRAMS			X			X			X				X	X		X		X		X								
RIVER BEND SOFTWARE																		X										
SRA/ SCIENCE RESEARCH			X	X	X	X	X	X	X	X	X		X	X	X	X		X		X								
STA/ MIND VOCATIONAL																				X		X	X		X			
SVE (SOCIETY FOR VISUAL ED)	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X		X								
SCHOLASTIC, INC.	X		X	X		X	X	X	X	X					X	X		X		X	X							
SHENANDOAH SOFTWARE	X		X		X																							
SOUTH-WESTERN PUBLISHING			X	X	X													X		X			X					
STATEWIDE TEACHING AIDS													X									X		X	X			
SUNBURST COMMUNICATIONS				X		X	X	X		X		X		X													X	X
TEACH YOURSELF BY COMPUTER	X		X		X	X	X	X								X		X										